

Report on Field Observations 10/2003-4/2004

By Bill Pine
Ontario, California

All INSPIRE participants are encouraged to make observations and send their data tapes and logs in for analysis. The *Journal* would like this report to reflect the activities of all observers. Any data is good data! Please send data tapes regardless of how “successful” the session turned out to be.

The guidelines for observations are:

1. Fill out a log cover sheet and data sheets for each observation.
2. Place a voice introduction on each tape indicating name, date and start time.
3. Insert a time mark every two minutes during the observations.
4. Submit the data to:

Bill Pine
1348 N. Quince ave.
Upland, CA 91786

The observations in this report will be given in chronological order. The convention for naming files is the following:

Name 4-26-04 13UT 06CST

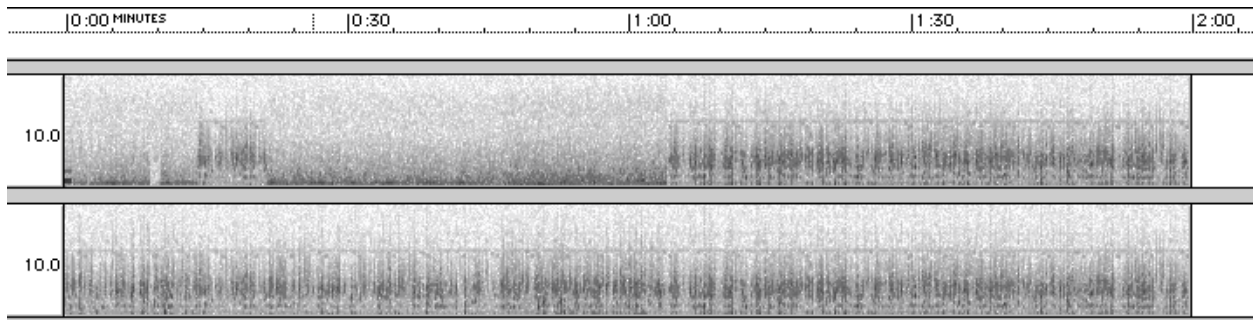
Observer Name Date Start Time UT. Start Time Local

Spectrograms made for data analysis include the first 2 minutes 0-22 kHz range; the first 2 minutes 0-11 kHz range; the first minute 0-11 kHz range and the first 30 seconds 0-11 kHz range. When circumstances dictate, other formats for spectrographic analysis may be used. Spectrograms are also made of any portions of the tape requested by the observer.

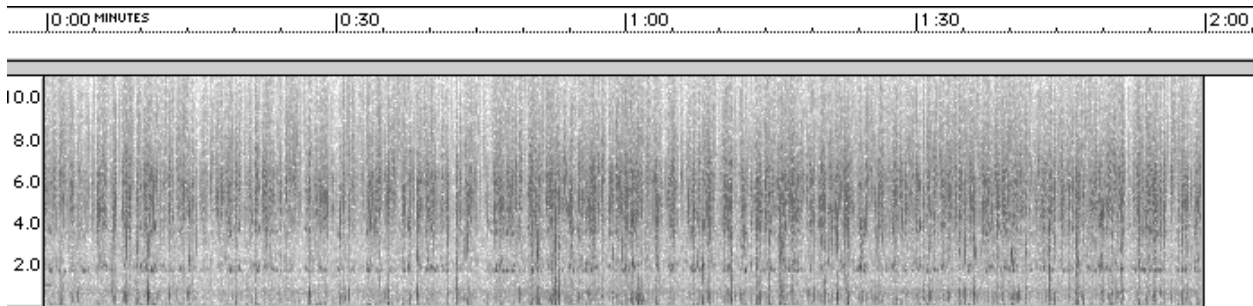
On all spectrograms, the frequency range appears at the left of the spectrogram and the time interval appears at the top of the display. The time scale always starts with “0”, rather from the actual time. An arrow on a spectrogram indicates the time interval shown on the following display.

11-20-03 Robert Bennett

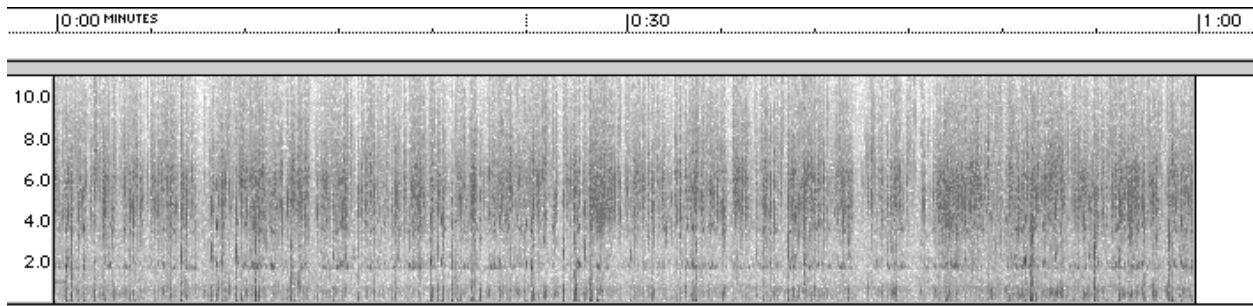
Las Cruces, NM



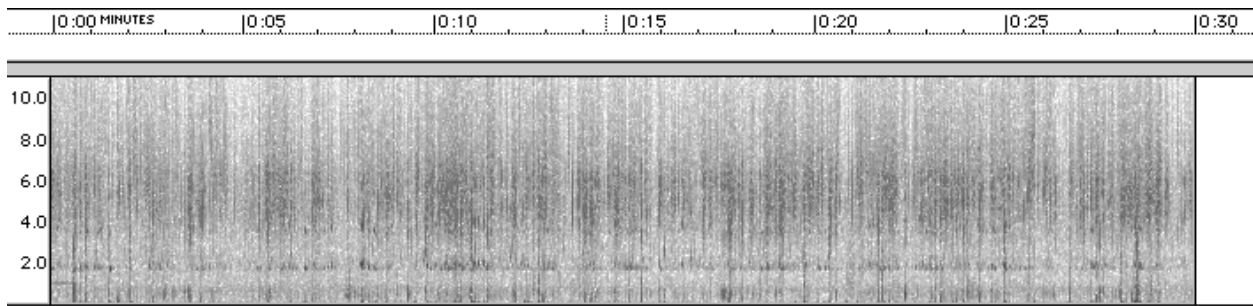
0346 UT 2046 MST WWV on top track with sections of data switched in occasionally. Data from a VLF3 receiver on the bottom track. Dense sferics and tweeks.



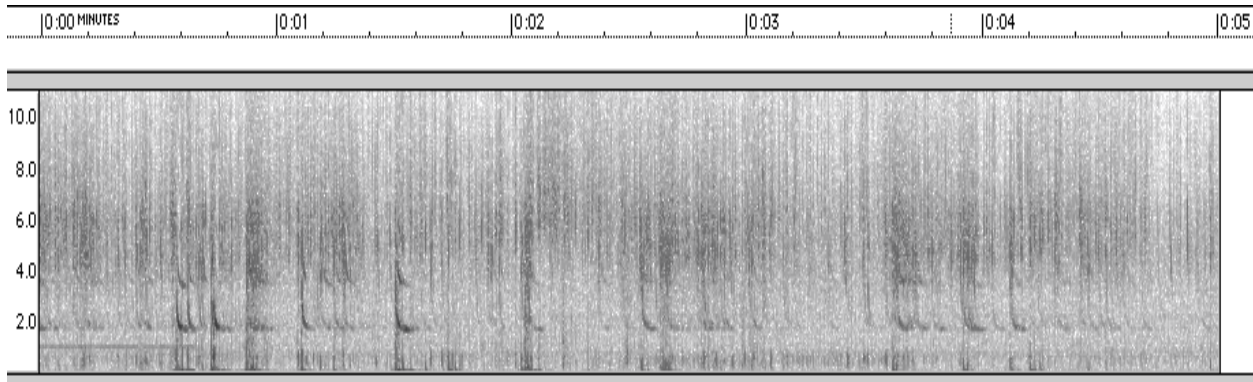
Data track using 0-11 kHz frequency range.



First minute.



First 30 seconds.



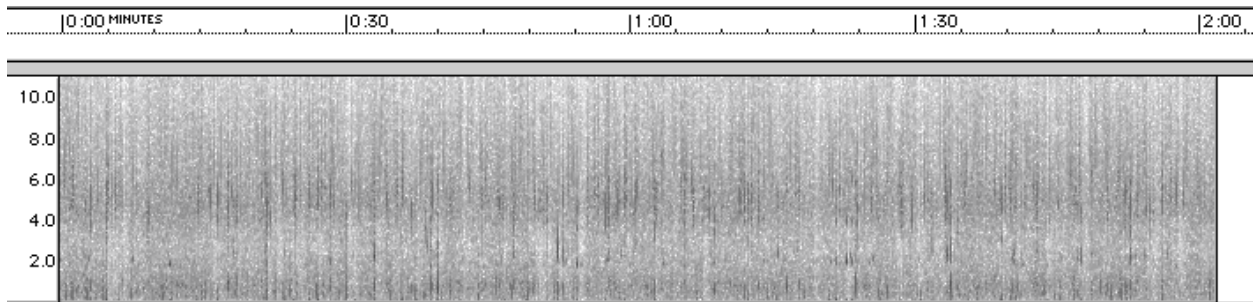
The first 5 seconds showing many individual tweeks.

Robert reports:

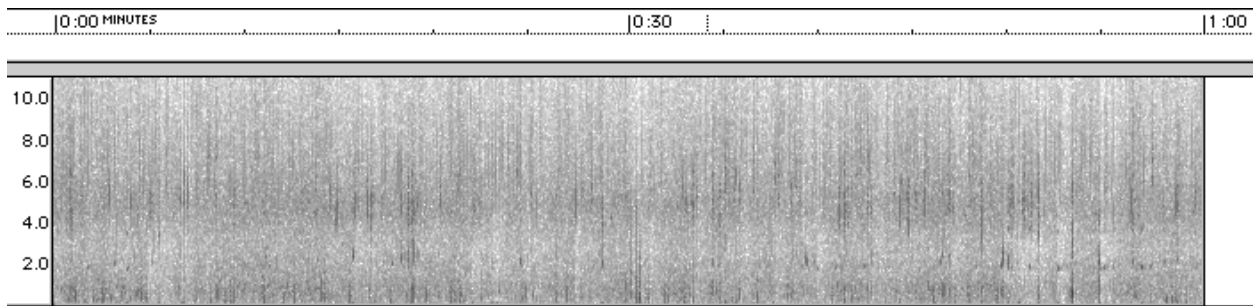
On 20 Nov, I monitored overnight. I started monitoring at about 8:00 PM Mountain Time. I made recordings during the 2040-2115 and 2120-2150 MST periods. I continued observing until 0200 MST on 21 Nov after which I went to sleep. I did not make any more recordings on 20/21 Nov. In general, I found the sferic and tweek levels and frequency to be very high when I started and slowly decreased in the early morning hours. The levels were so high that I could not hear the normally loud Loran signal. The monitoring conditions were otherwise excellent; the temperature at 2000 MST was 45 degrees F and slowly dropped to 36 degrees by sunup on the 21st. There was no moon and no wind and it was very dry in the desert. I experimented with both a 6-foot vertical whip (E-Field Probe) and a 120 foot long wire antenna. The Natural Radio signal levels were very high on both antennas but when using the whip, I did not hear any traces of either Loran or 60~ power line noise. However, using the long wire, I heard both Loran and some 60~ pick up. For some reason, the natural radio signal slowly decreased in amplitude and by 0200 on 21 Nov, I could clearly hear Loran on the 6-foot whip.

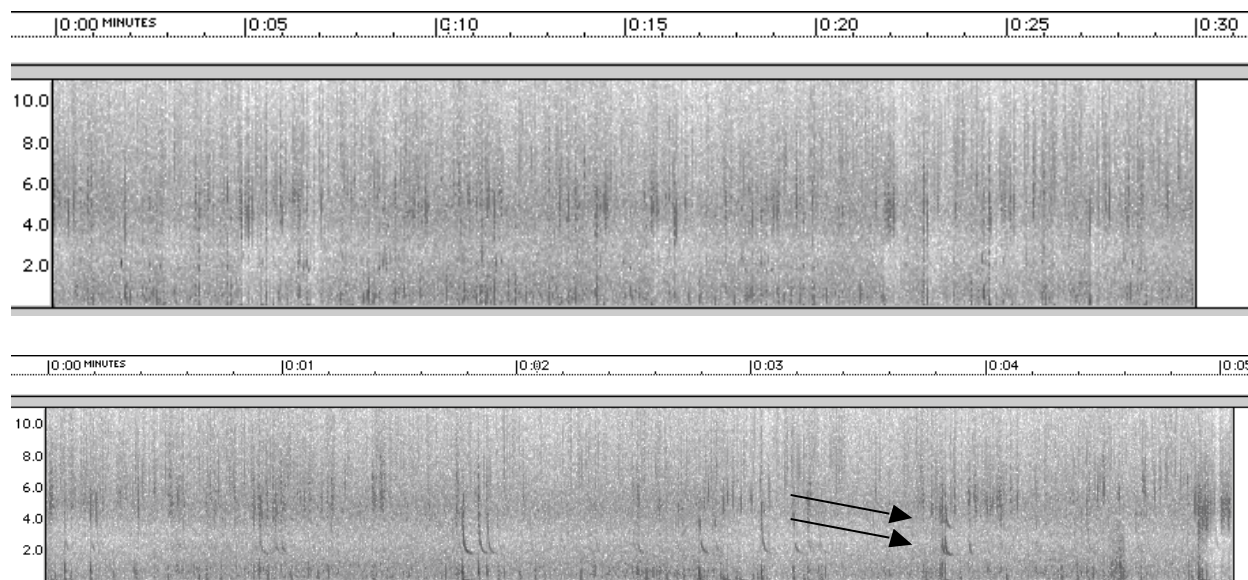
11-22-03 Robert Bennett

Las Cruces, NM

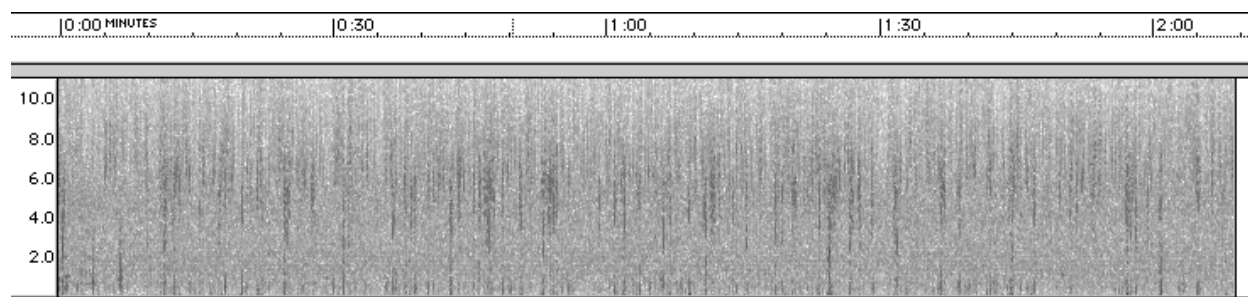


1217 UT Dense sferics and tweeks.

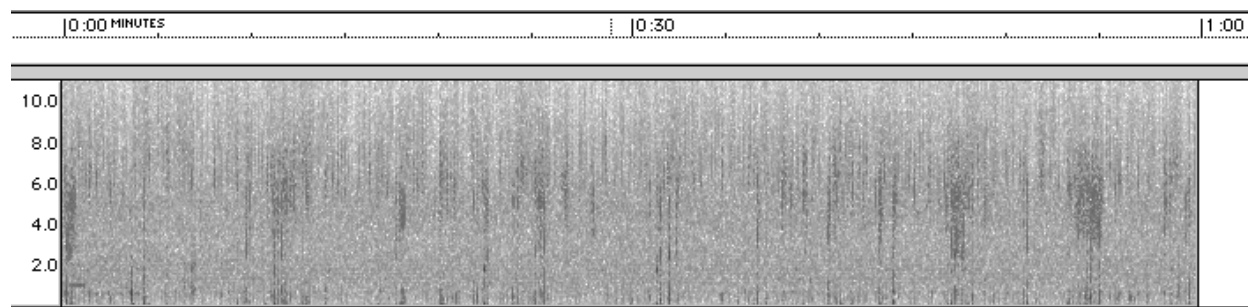


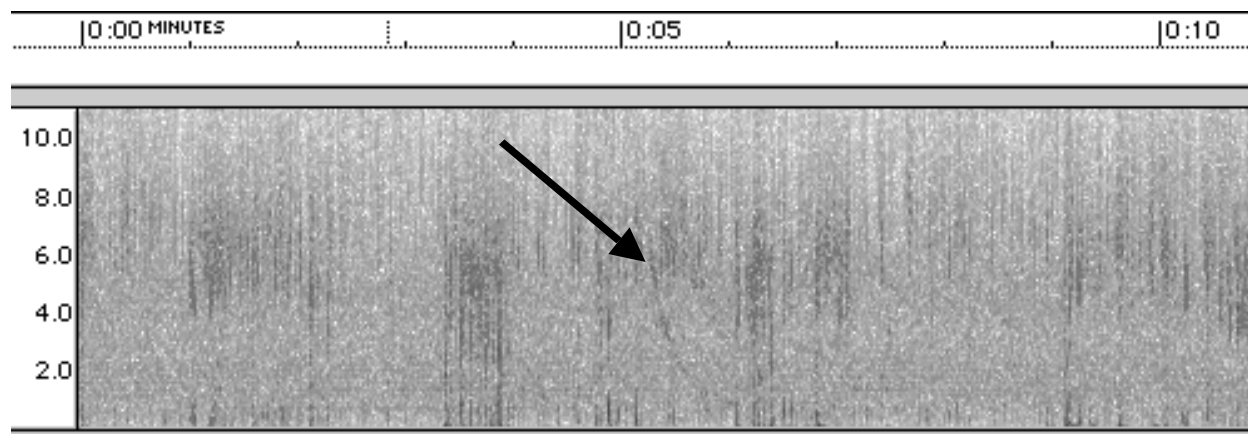
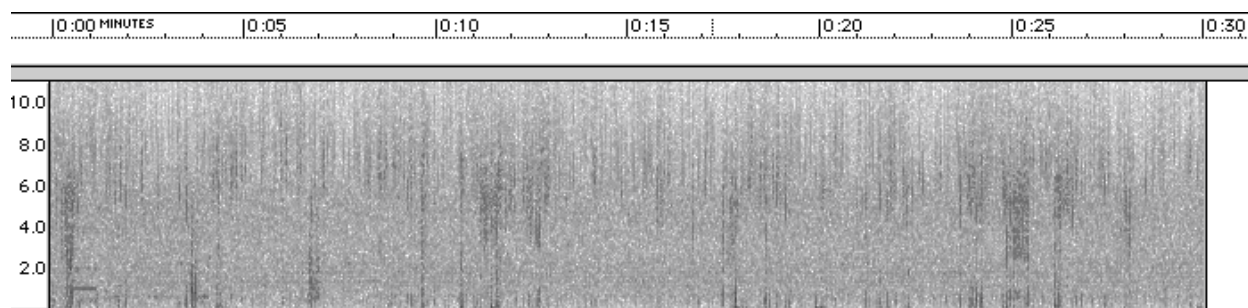


Note the tweek at 3.8 seconds with a harmonic of the tweek “hook” at about 4 kHz. This indicates a strong tweek.

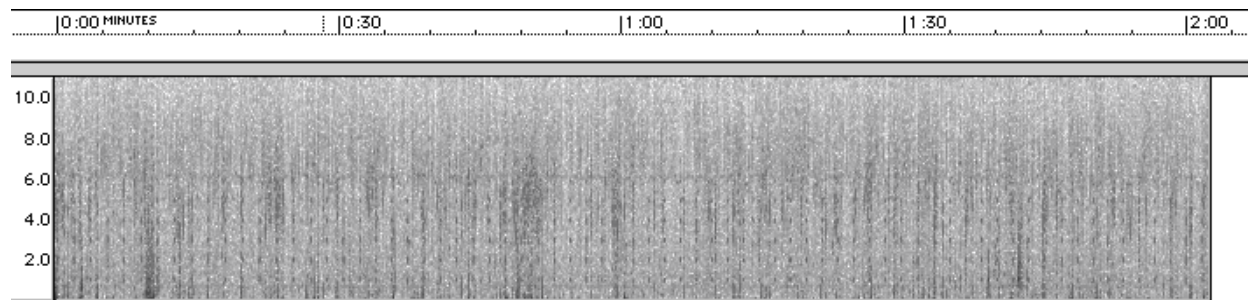


1305 UT Dense sferics, tweeks are rare.

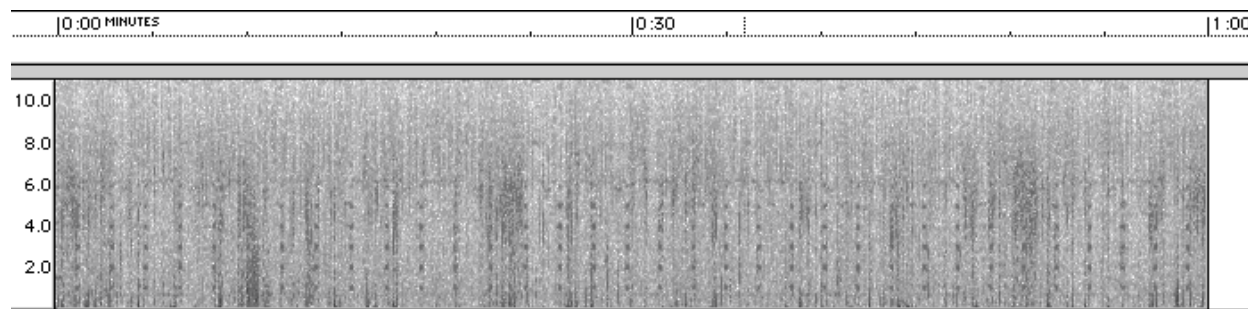


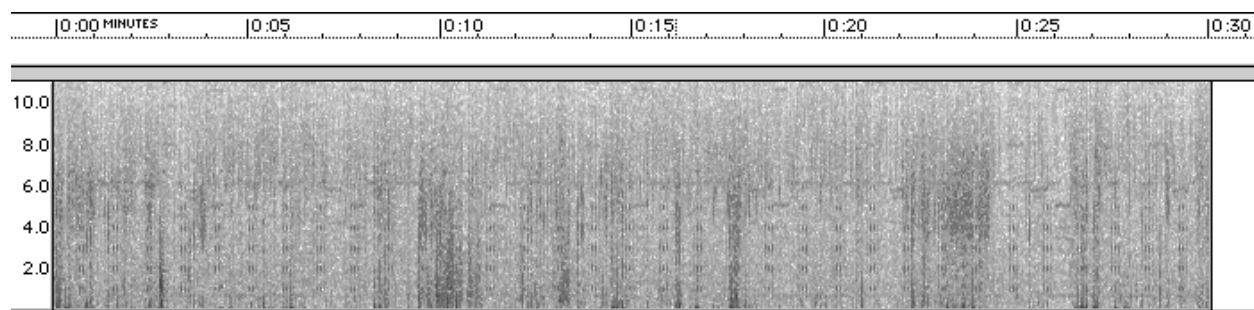


Segment starting at 1 minute showing a whistler at 1306:05 UT.

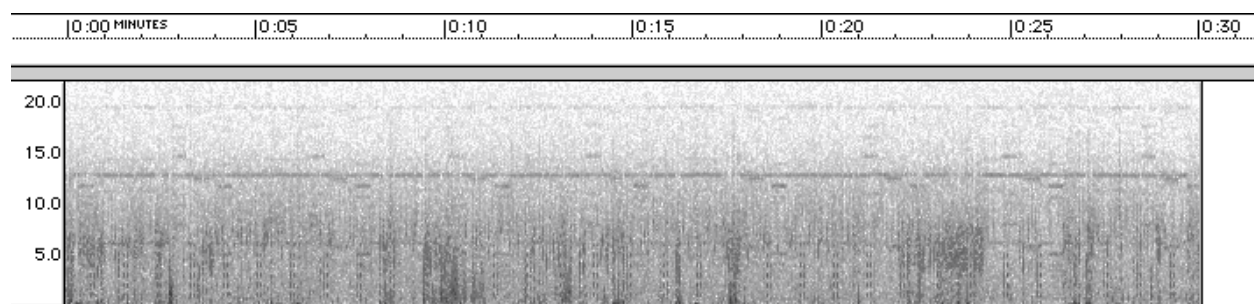


1400 UT 0700 MST Dense sferics, strong Loran





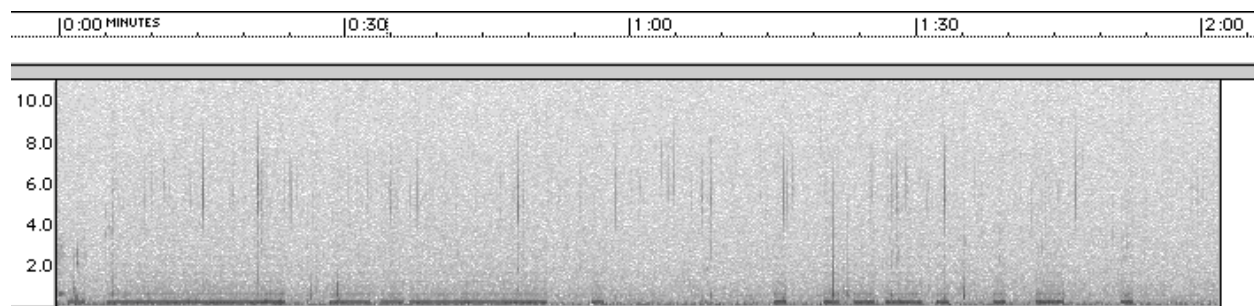
The vertical sets of dots are Loran.



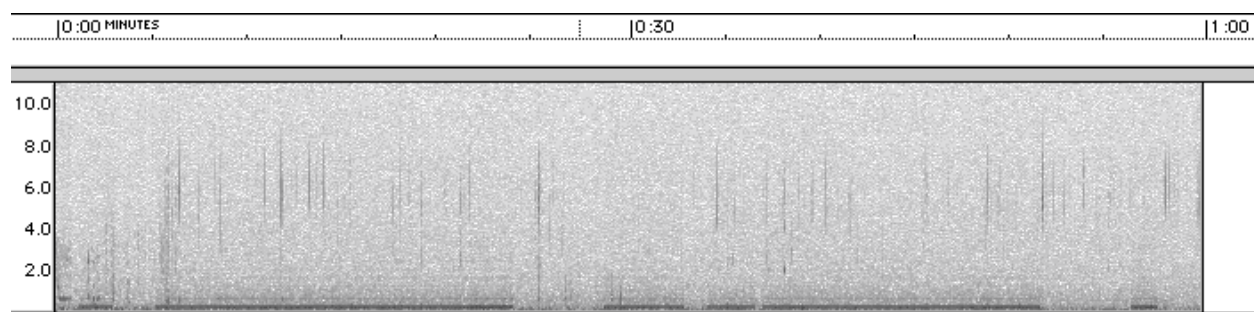
The first 30 seconds using a 0-22 kHz frequency range. Russian Alpha navigation dashes are clearly visible (and audible on the tape) between 12 and 15 kHz. A steady carrier also appears at about 13 kHz. Robert reported rising wind and deteriorating observing conditions.

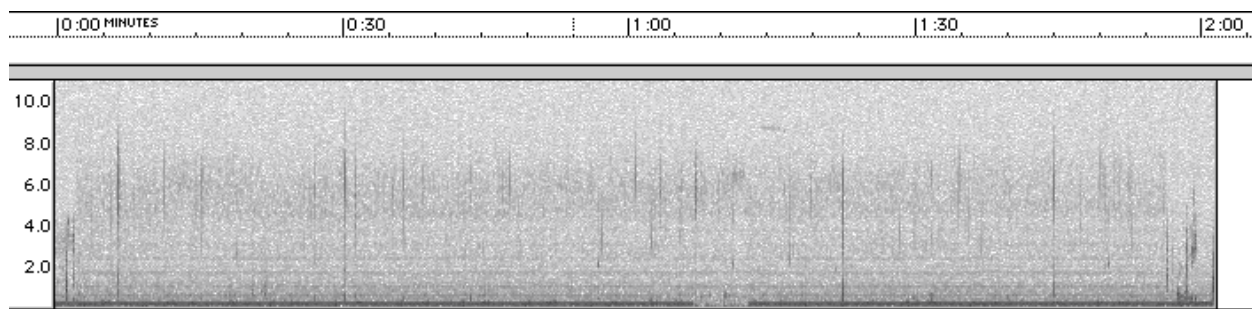
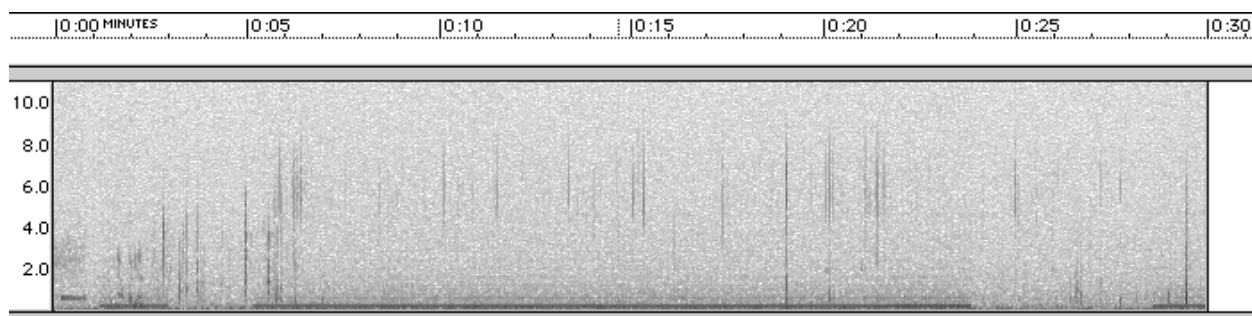
12-16-03 Chaffey High School

Ontario, CA

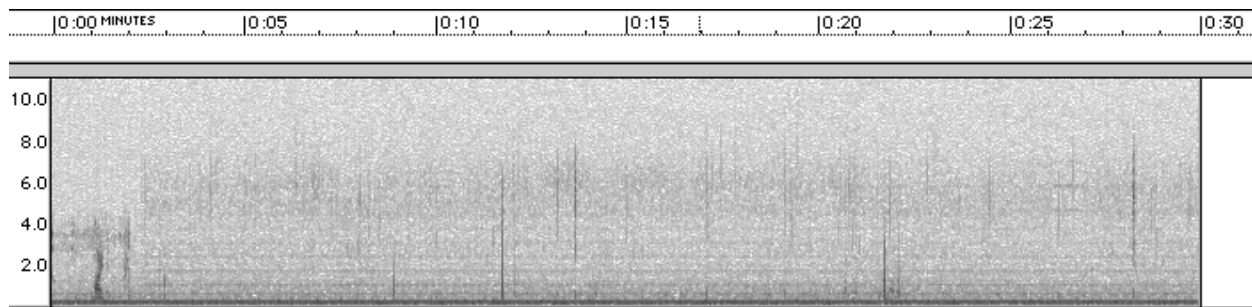
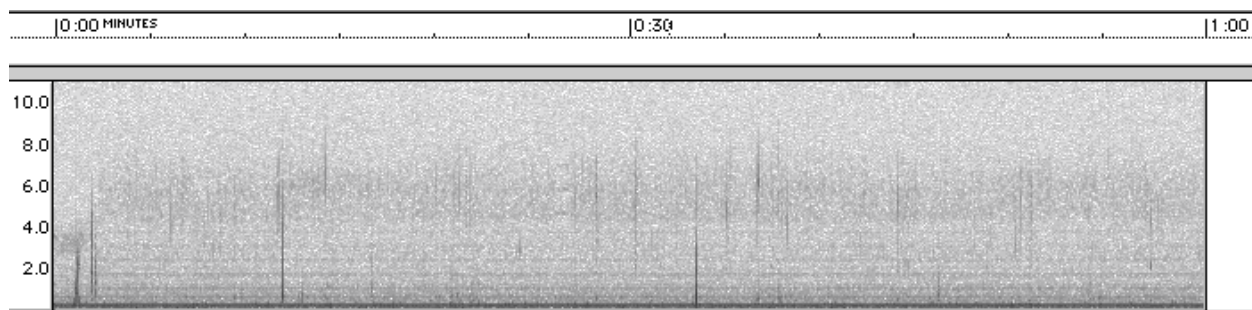


12/16/03 0102 UT Dearzy Martinez, Tiffany Steele Some sferics and tweeks.



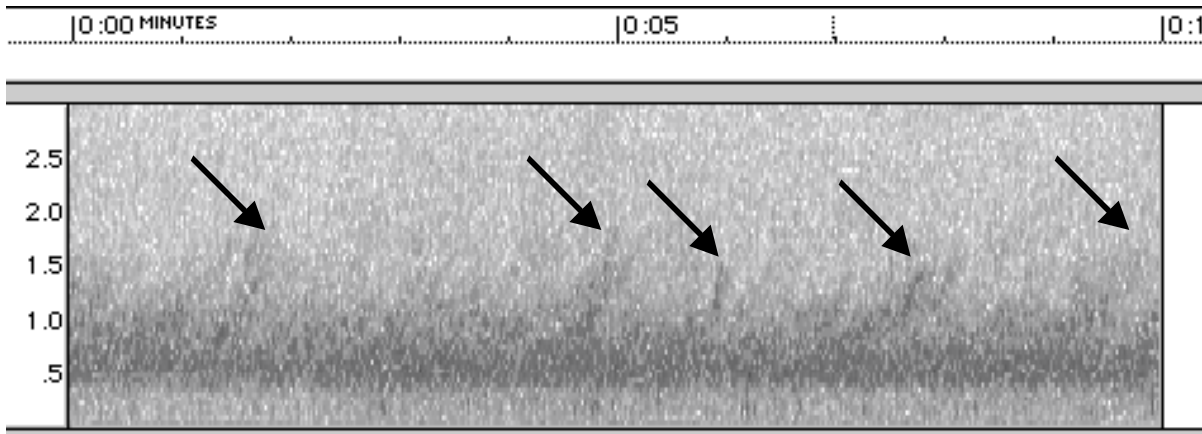


12/16/03 0129 UT Joelle Brown, Ana Guzman Some sferics and tweeks.

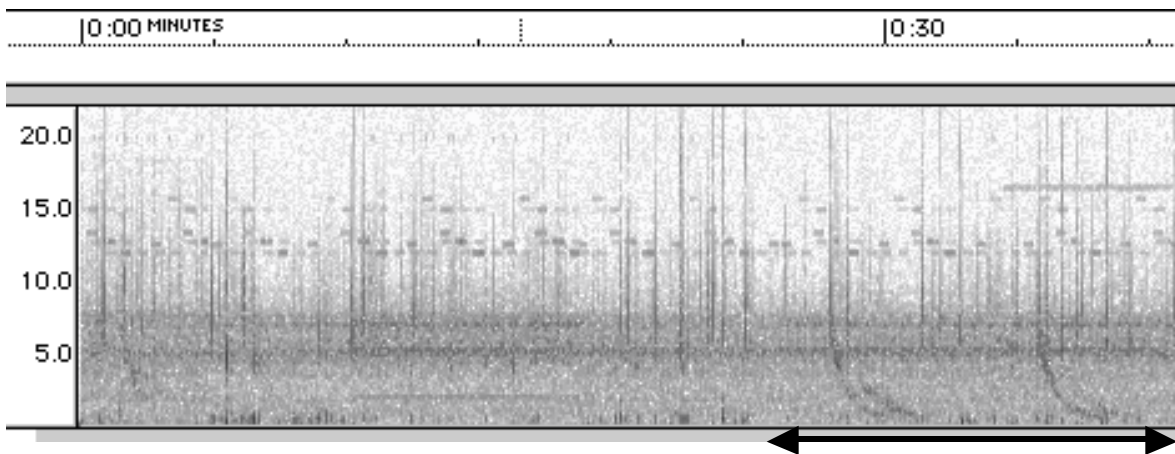


12-16-03 Shawn Korgan Gilcrest, CO
Recorded North of Fairbanks, Alaska

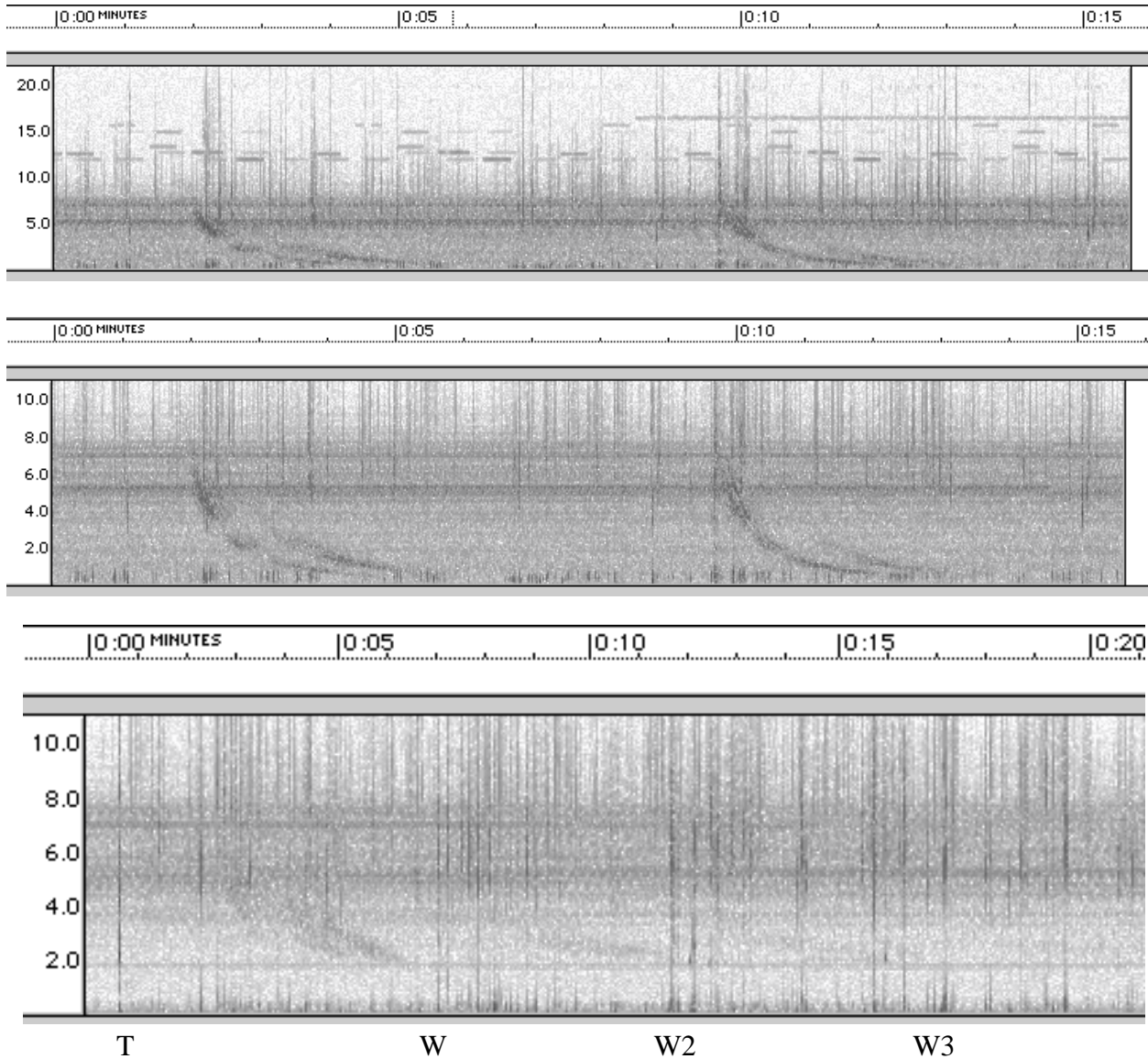
The following are some brief spectrograms of natural radio signals recorded by Shawn Korgan during the recent trip to Chatanika, Alaska.



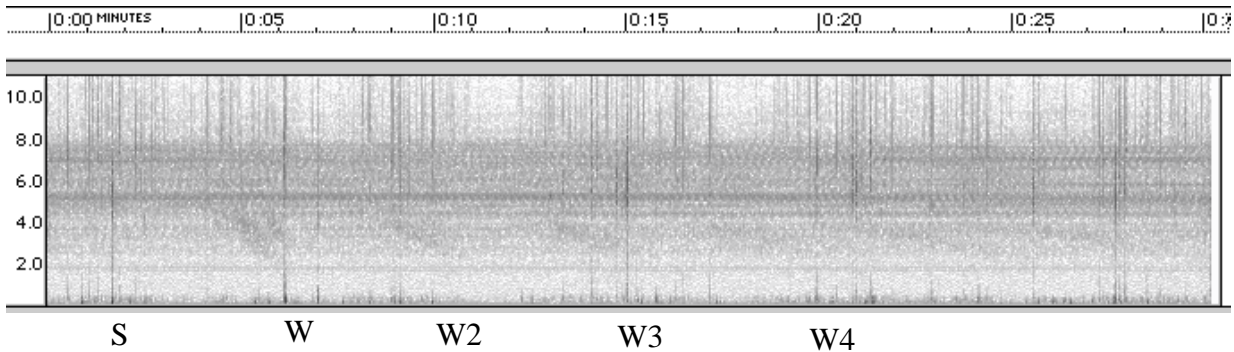
3-22-04 1200 Alaska Time (AT) Chorus sounds like birds chirping. On the spectrogram, chorus shows up as a series of rising tones. The arrows show the tops of the most prominent risers.



3/23/04 Whistler collection. This view, using a 0-22 kHz frequency range, shows Russian Alpha navigation signals as series of dashes between 12 and 15 kHz. The arrow indicates the segment enlarged below.



A whistler from later in the session. This sounds like a two-hop whistler originating with the strong tweak (T) followed by the whistler (W) and at least two echoes (W2 and W3).



Still later, a whistler (W) following a strong sferic (S). Several echoes follow the whistler.